

Mayflies of Vietnam: *Acerella* and *Drunella*
(Ephemeroptera: Ephemerellidae)

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Mayfly nymphs of the family Ephemerellidae collected in Vietnam by Dr. Tomas Soldan, Czechoslovak Academy of Sciences, included species of *Acerella* Allen and *Drunella* (*Drunella*) Needham.

Drunella (*Drunella*) Needham

Drunella s.s. now contains three Asian species, *D. gilliesi* Allen & Edmunds, described from Nepal, *D. perculata* Allen, new combination, described from Vietnam, and *D. soldani*, new species.

Drunella (*Drunella*) *perculata* Allen, NEW COMBINATION

Ephemerella (*Acerella*) *perculata* Allen, 1971:520.

Acerella perculata Allen, 1980:82.

Type locality.—Stream 6 km S Delat, Vietnam.

New record.—Stream nr. Duc Trong, Lam Dong Prov., Vietnam, 30-X-84, T. Soldan.

Diagnosis.—Head with paired submedian occipital tubercles. Pronotum with an anterior median and paired posterior submedian tubercles; mesonotum with paired anterior submedian tubercles, paired middle submedian tubercles, a median tubercle near posterior margin, and paired submedian tubercles near posterior margin; middle coxae with short tubercle on lateral margin; hind femora without distinct apical projections; claws with 5-7 denticles. Abdominal terga 1-9 with paired submedian tubercles, tubercles short and narrowly separated tergum 1, tubercles longer and more widely separated terga 2-3, tubercles longest and more widely separated terga 4-9; posterolateral projections 8-9 well developed, projection segment 9 long, extending beyond posterior margin segment 10 (see Allen, 1971, fig. 28).

Remarks.—This species was described from nymphs collected in Vietnam, and the nymphs from Duc Trong are unquestionably this species. They possess all of the morphological characters of the type series except for a mesonotal spine. A careful examination of nymphs described as *Acerella perculata* reveals that the lateral mesonotal spine that was described as being possessed by this species, and is a primary character of nymphs of *Acerella*, is attached to the coxae of the middle legs and not to the mesonotum. The absence of a mesonotal spine, the absence of spines or tubercles on the anterior margin of the fore femora, and the presence of tubercles on the head, thoracic nota and abdominal terga suggest that the correct placement of this species is with *Drunella* s.s.

Drunella (Drunella) soldani Allen, NEW SPECIES

Nymph.—Length: body 7.0–8.0 mm; caudal filaments 4.0–5.0 mm. General color light brown without distinctive markings. Head light brown; head with paired suboccipital tubercles between compound eyes; maxillary palpi 3-segmented, third segment rudimentary. Thorax light brown; mesonotum with a median posterior tubercle between bases wing pads; legs light brown; claws with 8–9 denticles. Abdominal terga light brown; terga 2–9 with paired submedian tubercles, tubercles small segment 2 and increasing in size to segment 8, spines on segment 9 smaller than 8; posterolateral projections segments 8–9 small, 9 not projecting beyond posterior margin segment 10; abdominal sterna pale. Caudal filaments brown with whorls small spines at apex each segment, without intersegmental spines.

Types.—Holotype. Mature female nymph, San Binh nr. Ba Vi, Vietnam, 15-XI-82, T. Soldan, in collection Czechoslovak Academy of Sciences, Praha.

Remarks.—This species is distinguished from the other two Asian species by the following combination of characters: (1) pronotum without tubercles; (2) hind femora without apical projection; (3) abdomen with paired submedian tubercles on terga 2–9; and (4) posterolateral projection on segment 9 not extending to nor beyond posterior margin segment 10.

Acerella Allen

The genus *Acerella* now includes only three species, *A. longicaudata* (Ueno), *A. commodema* Allen and *A. uenoi* Allen & Edmunds (= *undatella* Allen).

Acerella longicaudata (Ueno)

This species was described from Honshu, Japan, and the following record extends its known range to Vietnam.

New record.—Stream at Ba Vi, Wa Son Binh, Vietnam, 15-XI-84, T. Soldan, in collection California Academy of Sciences, San Francisco.

LITERATURE CITED

- Allen, R. K. 1971. New Asian *Ephemerella* with notes (Ephemeroptera: Ephemerellidae). *Can. Entomol.*, 103:512–528, figs. 1–46.
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